



# ATTRA *news*

Newsletter of the National Sustainable Agriculture Information Service: A project of the National Center for Appropriate Technology (NCAT)

## Sheep and Goat Production

Sheep and goats are important sources of milk, meat, and fiber for people all over the world. The flocks also improve pasture and remove unwanted vegetation. In years of drought and wildfires, the animals' ability to mow down flammable undergrowth can be crucial. This issue of ATTRAnews highlights some of the ways farmers and ranchers use these productive animals.

## Little Sheep Make Big Changes in Orchards and Vineyards

This spring in California's North Coast vineyards and orchards, little Babydoll Southdown sheep kept the grass short and protected the soil. If farmers had used tractors to mow, they would have compacted the wet ground, reducing the living organisms in the soil. Sheep also fertilize fields as they graze.

The rise of organic and sustainable farming has led to a new fascination with nature's lawnmowers – in this case Olde English Southdown Miniature Babydoll sheep. Full grown they measure only 24 inches at the shoulder. Because of their small size, they can't reach high enough to damage vineyards and orchards.

Deborah Walton of Canvas Ranch in Sonoma County leases the sheep to several organic and biodynamic vineyards. In 2004 at Fetzer's Bonterra Vineyard, the sheep were part of a study grant from USDA Western Sustainable Agriculture Research and Education.

Some grape growers leave the sheep in the vineyard until the fruit starts to ripen. Depending on the height of trellising, other growers remove the flock when vines begin to leaf out and then return the sheep in June. In orchards, sheep might stay year-round. For more information see [www.canvasranch.com](http://www.canvasranch.com) and refer to the vegetation management resources on the next page.



Photo: Rex Dufour, NCAT

Olde English Southdown Miniature Babydoll sheep can graze in vineyards without damaging the trellised vines overhead.

### Benefits of Grazing Miniature Sheep in Orchards and Vineyards

- Eliminate mechanical and chemical weed management
- Graze cover crops, grass and weeds
- Reduce soil compaction from mowing machinery
- Fit neatly under grape cordon or tree canopy
- Reduce frost damage by removing low vegetation so air can circulate
- Break up crusted soil surface with sharp hooves
- Add free manure
- Stay within portable solar electric net fencing

## SHEEP & GOATS

### What they can do for you



Free Webinar



### Free Webinar: Sheep and Goats What they can do for you

July 29, 2009, 1 p.m. Eastern Daylight Time  
(12 p.m. CDT, 11 a.m. MDT, 10 a.m. PDT)

Register at:

[www.attra.ncat.org/webinars2009/sheepandgoat](http://www.attra.ncat.org/webinars2009/sheepandgoat)

NCAT specialists Linda Coffey and Margo Hale will discuss:

- Multiple benefits of sheep and goats
- Selecting breeding stock
- Evaluating animal health
- Marketing meat, milk, and wool products, including organic
- Your questions about sheep and goat production

### Inside:

[www.attra.ncat.org](http://www.attra.ncat.org)

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# Where to Learn More about Sheep and Goat Production

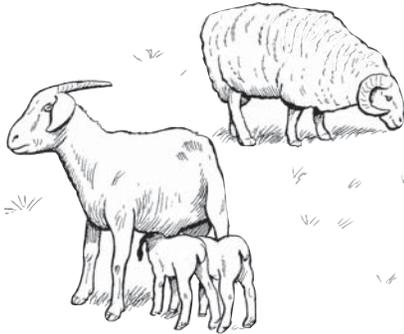
Sheep and goats have many uses in today's farms, ranches, and communities.

See the resources below and ATTRA's Small Ruminant Resources List to learn more.

## General Information on Sheep and Goats

### From ATTRA

- Small Ruminant Resources List
- Goats: Sustainable Production Overview
- An Illustrated Guide to Sheep and Goat Production—in English, Spanish or Hmong
- Predator Control for Sustainable and Organic Livestock Production
- Small Ruminant Sustainability Checksheet
- Sustainable Sheep Production (new version coming soon)



### From other sources

- American Sheep Industry: [www.sheepusa.org](http://www.sheepusa.org)
- Langston University Goat Research: [www.luresext.edu/goats/index.htm](http://www.luresext.edu/goats/index.htm)
- Maryland Small Ruminant Page: [sheepandgoat.com](http://sheepandgoat.com)

## Meat

### From ATTRA

- Meat Goats: Sustainable Production
- Sustainable Sheep Production



### From other sources

- National online resource for sheep and goat marketing: [www.sheepgoatmarketing.info](http://www.sheepgoatmarketing.info)
- Meat Goat Selection, Carcass Evaluation and Fabrication Guide: [www.lsuagcenter.com/en/crops\\_livestock/livestock/sheep\\_goats](http://www.lsuagcenter.com/en/crops_livestock/livestock/sheep_goats)

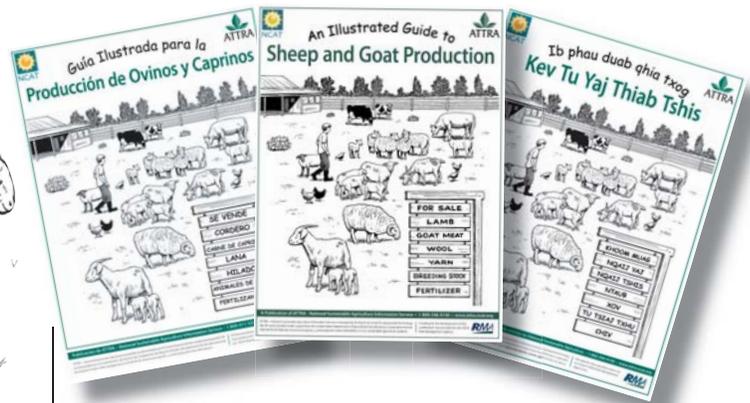
## Milk

### From ATTRA

- Dairy Goats: Sustainable Production
- Dairy Sheep
- Value-added Dairy Options

### From other sources

- Online library about commercial goat dairies: [www.goatdairylibrary.org](http://www.goatdairylibrary.org)
- Dairy Sheep Proceedings and Resources: [http://www.ansci.wisc.edu/Extension-New%20copy/sheep/Publications\\_and\\_Proceedings/res.html](http://www.ansci.wisc.edu/Extension-New%20copy/sheep/Publications_and_Proceedings/res.html)



## Fiber

- Handling and Marketing Wool: [www.umext.maine.edu/onlinepubs/htnmpubs/2070.htm](http://www.umext.maine.edu/onlinepubs/htnmpubs/2070.htm)
- Ron's Fiber Home: <http://hem.bredband.net/ronpar>
- Turning Wool into a Cottage Industry by Paula Simmons, 1991. Storey Books, Pownal, VT.



## Pasture Improvement and Vegetation Management

### From ATTRA

- Multispecies Grazing
- Pasture, Rangeland, and Grazing Management
- Pastures: Sustainable Management
- Ruminant Nutrition for Graziers—in English or Spanish

### From other sources

- Targeted Grazing: A Natural Approach to Vegetation Management and Landscape Enhancement: [www.cnr.uidaho.edu/rx-grazing/Handbook.htm](http://www.cnr.uidaho.edu/rx-grazing/Handbook.htm)
- Livestock for Landscapes: [www.livestockforlandscapes.com](http://www.livestockforlandscapes.com)
- Goats in the Woods is a Cornell University-based project for vegetation management in the Northeast: [www.dnr.cornell.edu/ext/goatsinthewoods/technical\\_materials/giw\\_technical\\_materials\\_page.htm](http://www.dnr.cornell.edu/ext/goatsinthewoods/technical_materials/giw_technical_materials_page.htm)
- BEHAVE uses animal behavioral principles to manage ecosystems: [www.behave.net](http://www.behave.net)

In addition to the publications listed here, ATTRA offers hundreds more that provide general information and specific details about all aspects of sustainable and organic agriculture. The publications are available to download for free from ATTRA's Web site, [www.attra.ncat.org](http://www.attra.ncat.org). Or call 1-800-346-9140 to order a free paper copy.

\* All illustrations in this issue of the ATTRAnews are by Robert Armstrong.

# Protecting Sheep and Goats from Internal Parasites

Control of internal parasites, especially of *Haemonchus contortus* (barber pole worm, stomach worm), is a primary concern for the majority of sheep and goat producers. The parasites have become more difficult to manage because they are becoming resistant to deworming medications. A severe infection of barber pole worm causes anemia, bottle jaw, and, if not treated, death of infected sheep and goats.

Mature parasites breed inside the host and lay eggs that are shed in the feces. Warm, humid conditions encourage the eggs to hatch. The infective larvae migrate 1 to 3 inches up blades of grass.

When a sheep or goat grazes, it may take in parasite larvae along with the pasture grass. Parasite numbers increase over time in warm, wet conditions. Because internal parasites are developing resistance to deworming drugs, it is important to use multiple management practices for control.

## Manage Pasture Carefully

- Keep forage height greater than 3 inches.
- Provide areas of browse: brush, shrubs, small trees.
- Maintain low stocking rate.
- Graze sheep and goats with cattle,

or in rotation with cattle or horses.

- Provide tannin-rich forages, such as *Sericea lespedeza*.
- Harvest hay from pastures.
- Avoid wet patches in pasture, such as from a leaky water trough.

## Reduce Deworming

- Decrease the use of dewormers. This will slow drug resistance and save money.
- Treat only animals that are anemic, which is a sign of parasitism.
- Use a visual system such as FAMACHA® charts, available at [www.scsrpc.org](http://www.scsrpc.org), for classifying animals based on levels of anemia.
- FAMACHA® is only effective for diagnosing infection by *Haemonchus contortus*.

## Select Resistant Animals

- Several breeds show resistance to

internal parasites. Select a resistant breed if it fits your system.

- Select individual animals that demonstrate resistance to parasites.
- Resilient animals can host a parasite burden without negative effects. However, they may be shedding high numbers of parasite eggs and spreading illness.
- Cull animals that are most susceptible to parasites and those that contribute most to pasture contamination.

For more information see ATTRA's *Managing Internal Parasites in Sheep and Goats*; *Tools for Managing Internal Parasites in Small Ruminants: Copper Wire Particles*; and *Tools for Managing Internal Parasites in Small Ruminants: Sericea lespedeza*. Also see the Southern Consortium for Small Ruminant Parasite Control, [www.scsrpc.org](http://www.scsrpc.org).



# Surveying the Market for Goat Meat

Meat goat production is on the rise as U.S. farmers become more aware of the meat's popularity among immigrant groups. Goats produce high-quality lean meat that is a favorite in ethnic cuisines, although it is not part of the typical American diet.

An Iowa study conducted in 2005 and 2006 investigated ways to increase the processing and marketing of chevon (goat meat) in greater Sioux City. This three-state urban area has a growing immigrant population. The study found that the market for goat meat varies along cultural lines.

Latino respondents, who were mostly Mexican, seek goat meat for special occasions such as birthday parties and Christian holidays. Many prefer live animals they can process themselves for freshness, a better price, and custom cuts.

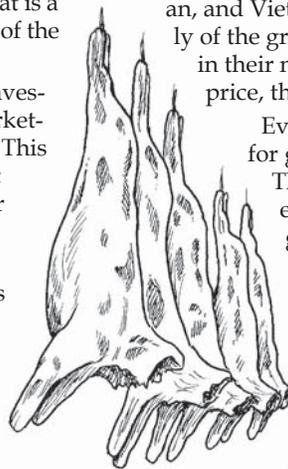
Muslim respondents, who were mostly Indian and Pakistani, would eat goat meat nearly everyday if it were available and affordable. They prefer the convenience of processed meat, but would occasionally buy a whole animal to process at home. They want meat that is fresh, hormone free and conforming to a Muslim prescribed manner of

slaughter involving prayer.

Southeast Asian respondents – mostly Laotian, Cambodian, and Vietnamese – consume goat meat the least frequently of the groups studied. Goat is uncommon and expensive in their native countries. Given similar availability and price, they would be as likely to eat goat as other meats.

Even though there is a potentially strong market for goat meat, producers face several problems. The various ethnic groups have different preferences. The majority population is unfamiliar with goat meat. An important barrier is the scarcity of small-scale state and federally inspected meat processing plants. The producers in this study either marketed the animals one at a time from their farms or sold their goats by the truckload to large, nationally integrated slaughter plants.

In spite of the obstacles, meat goat production is increasing nationwide. In 2008, 865,800 commercial meat goats were slaughtered in state and federally inspected plants. That was 15% more than in 2006.\*



— Continued on page 4 —



Return Service Requested

## New Information on Sheep and Goats

Thanks to a grant from the USDA Sustainable Agriculture Research and Education (SARE) program, sheep and goat producers will soon have a wealth of new resources.

An NCAT team is revising ATTRA's *Small Ruminant Sustainability Checklist*, *Small Ruminant Resources List*, and the *Small Ruminant Resource Manual*, which were developed under a previous SARE grant. The new manual will include sections on organic sheep and goat production and on marketing and economics. The group is also writing a new publication about organic livestock production.

The editorial team includes interns Chelsey Ahrens and Ann Bartlett assisting NCAT specialists Linda Coffey and Margo Hale—all based in Fayetteville, Arkansas, and specialist Hannah Lewis from the NCAT office in Des Moines, Iowa.

"We expect this project to have a positive impact in the South," Coffey said. "Our cooperators in Arkansas, Georgia, Kentucky, Oklahoma, and Tennessee will be training educators in the use of these materials. The workshops will feature experienced farmers."

To learn more contact Linda Coffey, [lindac@ncat.org](mailto:lindac@ncat.org), or Margo Hale, [margoh@ncat.org](mailto:margoh@ncat.org), 1-800-346-9140.



Sheep graze on low-growing pasture and weeds while goats prefer to browse on shrubs and brush.

**Surveying the Market for Goat Meat ... continued from page 3**

### Tips for Developing a Regional Market for Goat Meat

- Sell through farmers' markets that attract people of all ethnicities.
- Combine meat retailing and a restaurant. This strategy makes stocking fresh meat possible by using surplus in the restaurant.
- Form buying clubs among church or mosque members who commit to purchasing a consistent volume.
- Emphasize high quality and limited quantity by branding a product, such as "Siouxland Chevon."

For more information, contact NCAT specialist Hannah Lewis, [hannahl@ncat.org](mailto:hannahl@ncat.org), 1-877-327-6379. This article was adapted from "Assessing the market for chevon (goat meat) in Siouxland," Iowa State University Extension Sociology Technical Report 1026, by Betty Wells and Hannah Lewis, [www.soc.iastate.edu/extension/pub/tech/STR1026.pdf](http://www.soc.iastate.edu/extension/pub/tech/STR1026.pdf).

\*National Agricultural Statistics Service: *Livestock Slaughter Summaries 2008 and 2006*.

### New and Updated Publications from ATTRA

- Comparing Energy Use in Conventional and Organic Cropping Systems
- Nutrición para Aves de Pastura
- Completing Your Application for Organic Certification: Guide to the Basic Farm System Plan for Market Farm and Greenhouse Operations

## ATTRAnews

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